explanation. Perhaps the most representative exposition of this doctrine is Professor W. E. Hitter's two-volume work *The Unity of the Organism* (1919). It comprises a vigorous attack upon the geneticists, their too-exclusive devotion to genes, and their claim that the mechanism of heredity is now well known; as also upon the cell-doctrine in the form which asserts that the multicellular organism is just a colony of cells.

Under the former head he assembles a mass of evidence to show that[c] neither chromosomes nor chromatin are the sole bearers of heredity. . . . Many, probably all, living parts of the cell, and not the chromosomes alone, are the physical basis of heredity.' He denies Weismann's famous doctrine of the continuity of the germ-plasm, and argues that germ-cells are formed afresh in each generation from cells which in the process of becoming germ-cells undergo profound morphological changes. * We cannot/ he writes, * too constantly keep before our mind the fact of our almost complete ignorance of how any substance becomes hereditary substance, whether through the inheritance of acquired characters or in any other way. Hence speculation on the subject after the manner of the pangenes idea is much worse than nothing, if permitted to run into a bewildering and enslaving system like that of the germ-plasm theory as it came from Weismann's mind.

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Under the second head he inveighs against ' the elementalist habit of thinking '. This seems to be another expression for the additive way of

thinking; under it he has in mind chiefly the gene-theory and the view of the organism as an aggregate of cells. Each organism begins, he insists, as a unitary whole, and, in those which grow by the multiplication of cells by successive division,